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7 any other dissociated magnesium, an Mg:SiO₂ mass ratio of between about 1:15 to
8 about 1:2, and wherein at least 25% of the silicates have a molecular weight of at
9 least 10,000 Daltons.

1 9. (Amended) An aqueous composition for use in a brightening
2 stage of pulps comprising:

3 pulp containing less than 18% lignin; *chem pulp*

4 an aqueous solution of sodium silicate; *alkali*

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5 an alkali agent added in an amount sufficient to maintain the pH at
6 least about 8; and *mg*

7 a magnesium compound which dissociates in said solution to form
8 Mg(OH)⁺ cations, wherein said magnesium compound is added in an amount to
9 achieve, along with any other dissociated magnesium, an Mg:SiO₂ mass ratio of
10 between about 1:15 to about 1:2, and wherein at least 25% of the silicates have a
11 molecular weight of at least 10,000 Daltons.

1 20. (Amended) A method for brightening pulp comprising the
2 steps of:

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3 mixing pulp containing less than 18% lignin with hydrogen peroxide,
4 an aqueous solution of sodium silicate; an alkali agent added in an amount sufficient
5 to maintain the pH of said solution at least about 8; and a magnesium compound *mg 504.7/20*
6 which dissociates in said solution to form Mg(OH)⁺ cations, wherein said
7 magnesium compound is added in an amount to achieve, along with any other
8 dissociated magnesium, an Mg:SiO₂ mass ratio of between about 1:15 to about 1:2,
9 to form a mixture, and wherein at least 25% of the silicates have a molecular
10 weight of at least 10,000 Daltons; and

11 heating said mixture to allow said mixture to react to cause a portion
12 of said lignin to degrade.
